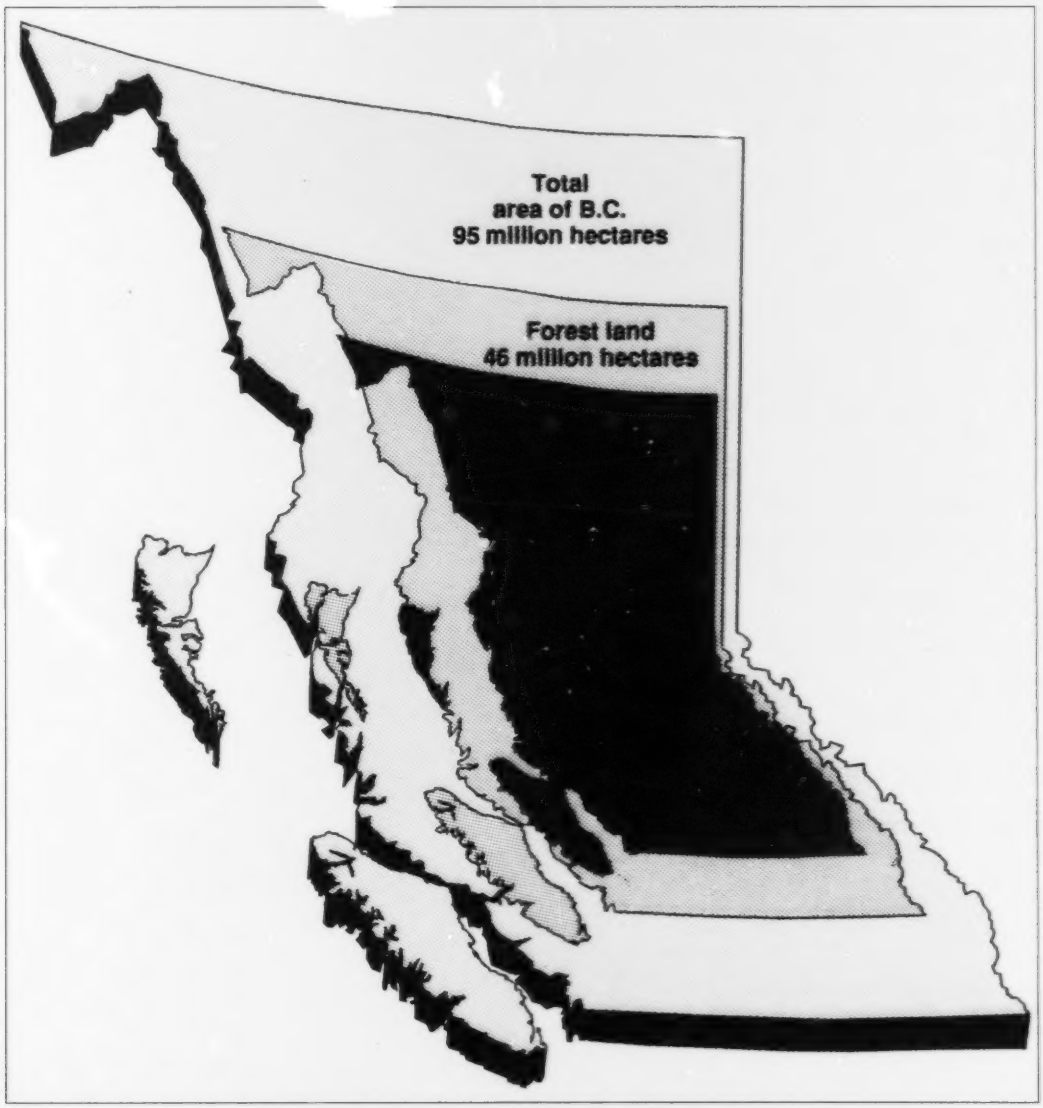
1988 Summary of Backlog Not Satisfactorily Restocked Forest Land



Province of
British Columbia
Ministry of
Forests

89-01033/

Canadian Cataloguing in Publication Data
Main entry under title:
1988 summary of backlog not satisfactorily restocked forest land

Cover title.
At head of title: Silviculture.
ISBN 0-7726-0887-3

1. Reforestation – British Columbia – Statistics.
2. Forest management – British Columbia – Statistics.
I. British Columbia. Ministry of Forests.

SD391.N56 1988 634.9'56'09711 C89-092012-5

Executive Summary

The 1984 Forest and Range Resource Analysis estimated that there were 738 000 hectares of good and medium site land that had been harvested, burned by wildfire, destroyed by pests or other damage and were classified as backlog not satisfactorily restocked (NSR). These areas were considered economically viable and a high priority to reforest. The estimate of the backlog NSR in the province was the motivation for the 1985-1990 Canada-British Columbia Forest Resource Development Agreement (FRDA).

Under FRDA there has been increased reforestation activities on backlog areas. Increased planting and silviculture surveys have resulted in fewer areas being classed as backlog NSR. Modifications in ecosystem classification and survey procedures, as well as modifications in silviculture stocking standards, have also resulted in less land being classed as backlog NSR.

This summary indicates that as of September 1988, there are 553 100 hectares of backlog NSR on good and medium sites that are accessible and economically viable to treat. There has been a 25% reduction in backlog NSR due to FRDA activities in the past 3 years. Backlog NSR will continue to be reduced during the remaining years of the current agreement.

Table of Contents

Executive Summary iii

Summary of Provincial Backlog NSR 1

Source of Information for Report 2

Map of Provincial Backlog NSR 3

Summary Table of B.C. Forest Land Statistics 4

Comparison of 1984 and 1988 Backlog NSR 5

Graph of Provincial Backlog NSR 7

Review of the Regional Backlog NSR 8

Graph of the Regional Backlog NSR 10

APPENDICES

1 Summary of Regional Proportions 23

2 Summary of Backlog NSR by Region, TSA and TFL 24

3 Summary of Net Down Process for Backlog NSR 33

Summary of the Provincial Backlog Not Satisfactorily Restocked Land

British Columbia has dramatically varying biological, geographical and climatic conditions. These conditions result in a great variation of ecosystems and tree growth. Throughout British Columbia there are site-specific silviculture stocking standards for each forest ecosystem. These ecosystem-specific standards guide foresters in the selection of acceptable crop trees, and target and minimum densities of well-spaced crop trees for reforestation. Areas that do not contain sufficient stocking of well-spaced acceptable crop trees are classified as Not Satisfactorily Restocked (NSR).

Prior to January 1, 1982 many areas were harvested, burned by wildfires, or destroyed by pests or other damage. In 1988, many of these areas are not yet reforested with an acceptable crop of trees. This report summarizes the amount of area denuded prior to January 1, 1982 that is still classified as not satisfactorily restocked. These NSR areas are referred to as backlog NSR.

The Province of British Columbia is 95 million hectares in size. Parks, alpine forest, open range, water and private land account for 49 million hectares. A further 46 million hectares are classed as forest land capable of growing a merchantable stand. Potential parks, urban and agricultural settlement areas, hydro development, mining activities, roads, railways and ecological reserves have all reduced the available forest land base. In addition there are areas that are productive and available but are inaccessible or contain presently noncommercial tree species and nonmerchantable forest cover. Only 26 million hectares of forest land are potentially productive and available for forest management. At present 3.7 million hectares of the potentially productive and available forest contains non-commercial cover, areas of doubtful stocking, or are NSR. Of this amount, 1.1 million hectares are good and medium site land and are classified as backlog NSR (Table 1). About half of this backlog NSR is on sites considered inoperable or uneconomic to reforest at this time.

This summary indicates that 553 100 hectares of backlog NSR are good and medium site and are accessible and economically viable to treat. The 1984 Forest and Range Resource Analysis estimated that 738 000 hectares of good and medium site were included in the backlog NSR in the province (Table 2). The 25% reduction in backlog NSR in the past 3 years can be attributed to modifications in silviculture stocking standards and classification procedures, increased planting on backlog sites, and increased silviculture survey work.

The Canada-B.C. Forest Resource Development Agreement (FRDA) has provided the funding for increased silviculture activities on backlog sites. Between May 1985 and September 1988 over 270 000 hectares of silviculture surveys were carried out to determine forest land stocking status. In addition more than 69 000 hectares of NSR land was planted. As of September 1988, these activities have helped reduce backlog NSR to 553 100 hectares. Continued reforestation activities within the present FRDA agreement and any future agreements will continue to reduce backlog NSR.

Pages 3 and 6 indicate the location and amount of Regional good and medium site backlog NSR. This report details the backlog NSR by Region, Timber Supply Area and Tree Farm Licence (Pages 8-21 and Appendix 2).

Source of Information for this Report

The data used to produce the summary tables for this report came from several sources:

1. Estimates available at the time of signing the 1985-1990 Canada-British Columbia Forest Resource Development Agreement indicated that there were 644 552 hectares of good and medium site backlog NSR in the province. In 1984[1], the Ministry produced updated information indicating that the backlog NSR was 738 000 hectares (Table 2). This estimate was confirmed and published in Renewal in 1986[2].

2 Data on the total forest land and total non-commercial cover (NC), disturbed stocking doubtful (DSD) and gross NSR were taken from the 1987/88 Ministry of Forests Annual Report (Table 1). This information was submitted by the Ministry of Forests Inventory Branch. The statistics on the total productive and available forest land are from the Ministry of Forests 1984 Forest and Range Resource Analysis.

3. Data for the backlog NSR on Tree Farm Licences (TFL) were derived from hand-compiled submissions by the licence holders.

4. Data for the gross good and medium site backlog NSR on Timber Supply Areas was derived from the computerized Ministry of Forests' History Records for the Cariboo, Kamloops, Nelson, Prince Rupert and Vancouver Forest Regions. The estimate of gross backlog NSR on Prince George TSA's was derived from a 1988 Incremental Silviculture Planning Audit (by Laing & McCulloch). Data for the *NET* NSR were derived from the gross area totals after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

5. The History Records were used to derive the net backlog NSR on Timber Supply Areas for all Regions. The intent of using the History Records for the net backlog NSR number is to:

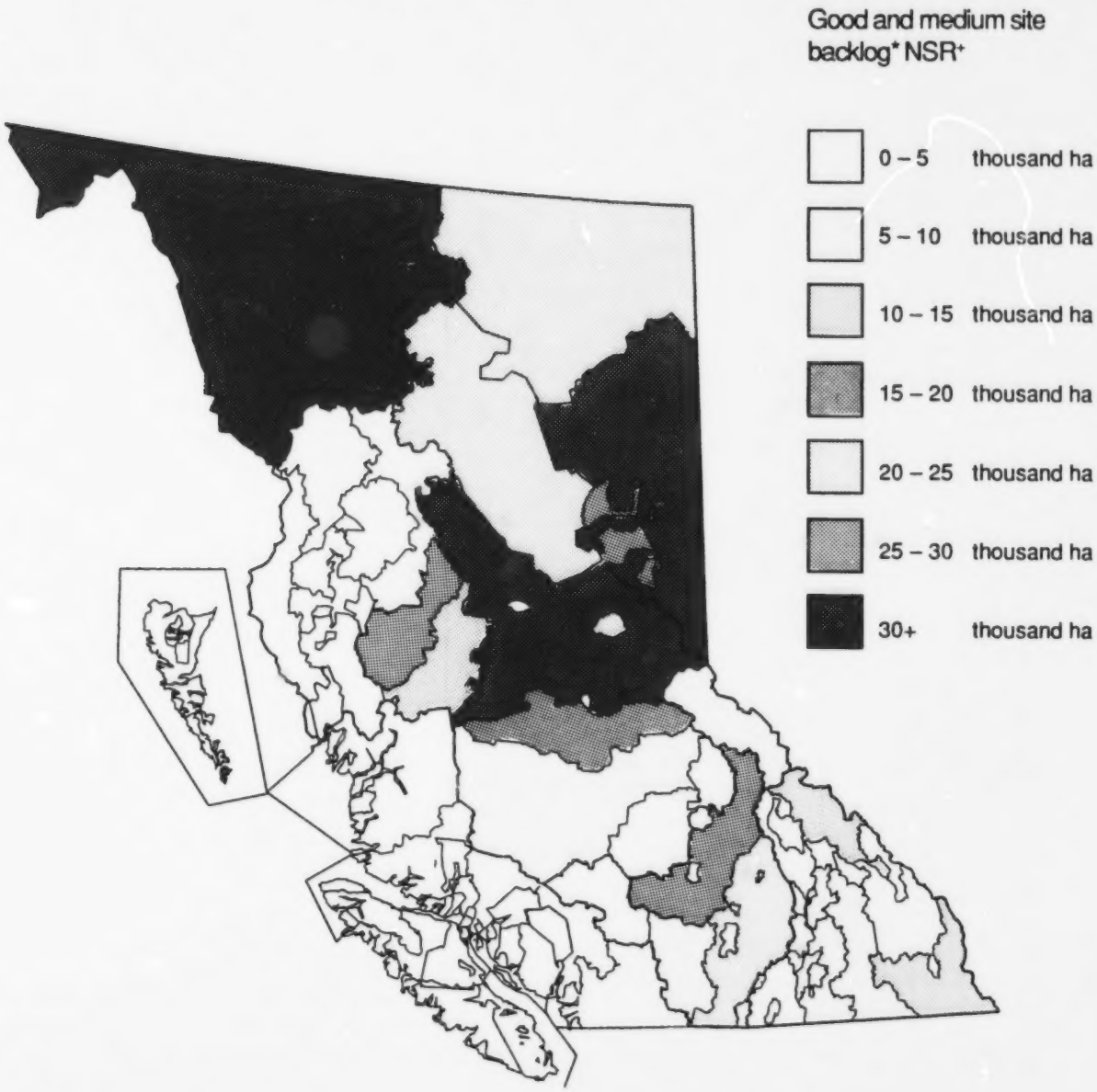
    a) provide summaries on a consistent and auditable basis of the net backlog NSR openings identified in this report;

    b) record ongoing reforestation activities and any changes in forest land status due to these activities; and

    c) monitor the change in forest land stocking status through silviculture activities funded under any future Federal-Provincial agreement.

[1] Forest and Range Resource Analysis, 1984. Ministry of Forests.
[2] Renewal, 1986. Vol. 1, No. 1. Fall 1986.

Location of the Good and Medium Site Backlog Not Satisfactorily Restocked Land


Good and medium site backlog* NSR+
0 – 5 thousand ha
5 – 10 thousand ha
10 – 15 thousand ha
15 – 20 thousand ha
20 – 25 thousand ha
25 – 30 thousand ha
30+ thousand ha

*Backlog – areas denuded prior to 1982

+NSR – not satisfactorily restocked (includes non-commercial brush areas)

TABLE 1 Summary table of British Columbia forest land statistics

Region	Inventory database*			Gross good and medium site backlog NSR (3)	Net+ good and medium site backlog NSR (3)		
	Total forest land	Total productive and available forest	Total NC (1) DSD (2) and NSR (3)		Due to harvesting	Due to wildfire and other causes(6)	Total
	(area in hectares)						
Cariboo	5 939 000	3 925 605	157 000	38 961	26 862	3 885	30 747
Kamloops	4 454 000	3 657 034	195 000	114 805	58 071	16 170	74 241
Nelson	3 653 000	2 509 410	204 000	93 758	39 852	20 935	60 787
Prince George	17 438 000	9 412 878	2 069 000	613 439 (4)	160 914	110 833	271 747
Prince Rupert	9 418 000	3 563 812	898 000	239 839 (5)	34 838	71 558	106 396
Vancouver	5 057 000	3 079 518	198 000	9 552	8 705	522	9 227
Provincial totals	45 959 000	26 148 257	3 721 000	1 110 354	329 241	223 904	553 145

* Source: 1987/88 Ministry of Forests Annual Report.

\+ Net area after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

(1) NC = Non-commercial brush.

(2) DSD = Disturbed areas; stocking doubtful.

(3) NSR = Not satisfactorily restocked.

(4) Source: Incremental Silviculture Planning Audit for the Prince George Forest Region (By Laing & McCulloch).

(5) Source: Prince Rupert's History Records plus the 1982 Cassiar fires and the 1983 Swiss Fire.

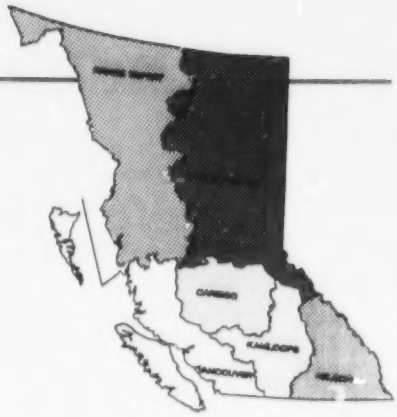
(6) Others include: pest damage, flood and blowdown from wind.

TABLE 2 Provincial summary of the backlog* not satisfactorily restocked land. Good and medium site

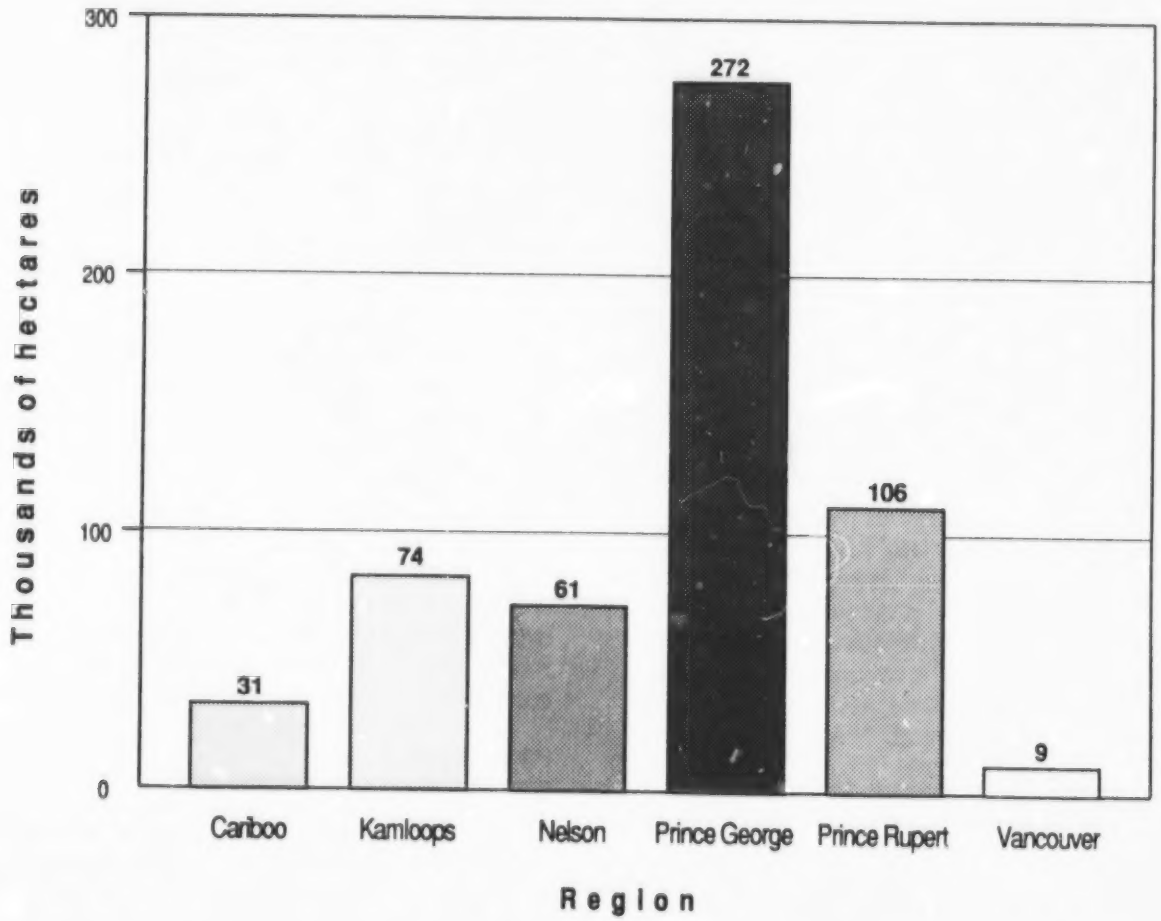
Region	1984 Resource analysis	1988 Summary +	% Difference in 1984 and 1988 summaries
	(area in hectares)		
Cariboo	43 400	30 747	–29%
Kamloops	51 400	74 241	44%
Nelson	93 700	60 787	–35%
Prince George	488 700	271 747	–44%
Prince Rupert	40 500	106 396	163%
Vancouver	20 300	9 227	–54%
Provincial totals	738 000	553 145	–25%

* Backlog - areas denuded prior to 1982 (includes non-commercial brush areas).

\+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licences. Data derived from TFL's and the Ministry of Forest's History Records.



Provincial Backlog* Not Satisfactorily Restocked Land+ (Good and Medium Sites Only)



* Backlog – areas denuded prior to 1982 (includes non-commercial brush areas)
+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licences.
+ Data derived from TFL's and the Ministry of Forest's History Records.

Cariboo

The Ministry of Forests 1984 Forest and Range Resource Analysis estimated that the Cariboo Forest Region had 43 400 hectares of good and medium site land classified as backlog not satisfactorily restocked (NSR) land. The 1985 Canada-B.C. Forest Resource Development Agreement (FRDA) has provided funding for increased reforestation activities on these backlog NSR areas.

Increased planting and silviculture surveys have resulted in a decrease in the amount of backlog NSR. The 1988 summary estimates that 30 700 hectares of good and medium site class backlog NSR remain in the Cariboo Forest Region (pages 10 and 11).

Kamloops

In 1984 the Kamloops Forest Region had an estimated 51 400 hectares of good and medium sites classified as backlog NSR. Through funding under the Forest Resource Development Agreement there has been an increase in the amount of silviculture surveys on Crown land. The increased survey activity in the past four years has enabled the Region to obtain a more accurate estimate of the backlog NSR. The 1988 summary indicates that 74 200 hectares of good and medium site backlog NSR exist (pages 12 and 13).

Although the region has had increased planting on backlog sites, silviculture surveys have indicated more areas needing reforestation. The Kamloops Forest Region has on average the lowest provincial plantation survival percentages. The relatively hotter, and moisture-limited climate results in more difficult forest establishment. Many areas previously considered as satisfactorily restocked (SR) have been reclassified as NSR due to plantation or natural regeneration failure.

Nelson

The 1984 Forest and Range Resource Analysis estimated that 93 700 hectares of good and medium sites were backlog NSR in the Nelson Forest Region. The 1988 summary indicates that 60 800 hectares remain (pages 14 and 15). The reduction in backlog NSR can be attributed to the increased reforestation activities funded under FRDA.

Increased planting on backlog NSR areas and silviculture surveys have resulted in less area being classified as NSR. In addition, a modification in silviculture stocking standards and reclassification of selectively-logged areas has resulted in decreased estimates of backlog NSR in the Nelson Forest Region.

Prince George

In 1984 it was estimated that the Prince George Forest Region had 488 700 hectares of good and medium sites classified as backlog NSR. The 1988 summary indicates that approximately 271 700 hectares remain (pages 16 and 17). This reduction in backlog NSR can be attributed to the increased reforestation activities funded through the Forest Resource Development Agreement.

Increased planting on backlog NSR areas and silviculture surveys have resulted in less area being classified as NSR. Changes in silviculture stocking standards and forest classification procedures have had a large impact on reducing the backlog of NSR. The Region estimates that there are in total 613 400 hectares classified as good and medium site backlog NSR. However, many of these sites are in locations that are considered presently inoperable, inaccessible, or have a low economic or treatment priority. About 271 700 hectares are estimated to be economically viable to treat at this time.

Prince Rupert

In 1984 the Forest and Range Resource Analysis estimated that Prince Rupert Forest Region had 40 500 hectares of good and medium sites classified as backlog NSR. Many of these NSR areas were caused by wildfires. The 1988 summary indicates that 106 400 hectares of good and medium site backlog NSR exist in the Prince Rupert Forest Region.

The 1988 summary includes 14 900 hectares of medium site NSR from the 1983 Swiss fire in the Morice TSA. This area is presently eligible for FRDA funding. The 1984 analysis indicated that much of the Cassiar TSA backlog NSR was classed as poor site. After surveys and reclassification the 1988 summary indicates that there are 45 631 hectares of good and medium site backlog NSR in the Cassiar TSA. These areas are now considered part of the economic and operable corridor of the TSA. The Prince Rupert Forest Region forecasts that there may be increased demand for timber within this TSA in the near future. In anticipation of increased wood supply demand, the Region believes there is a need for increased backlog reforestation of economic and operable good and medium backlog NSR areas in the Cassiar TSA.

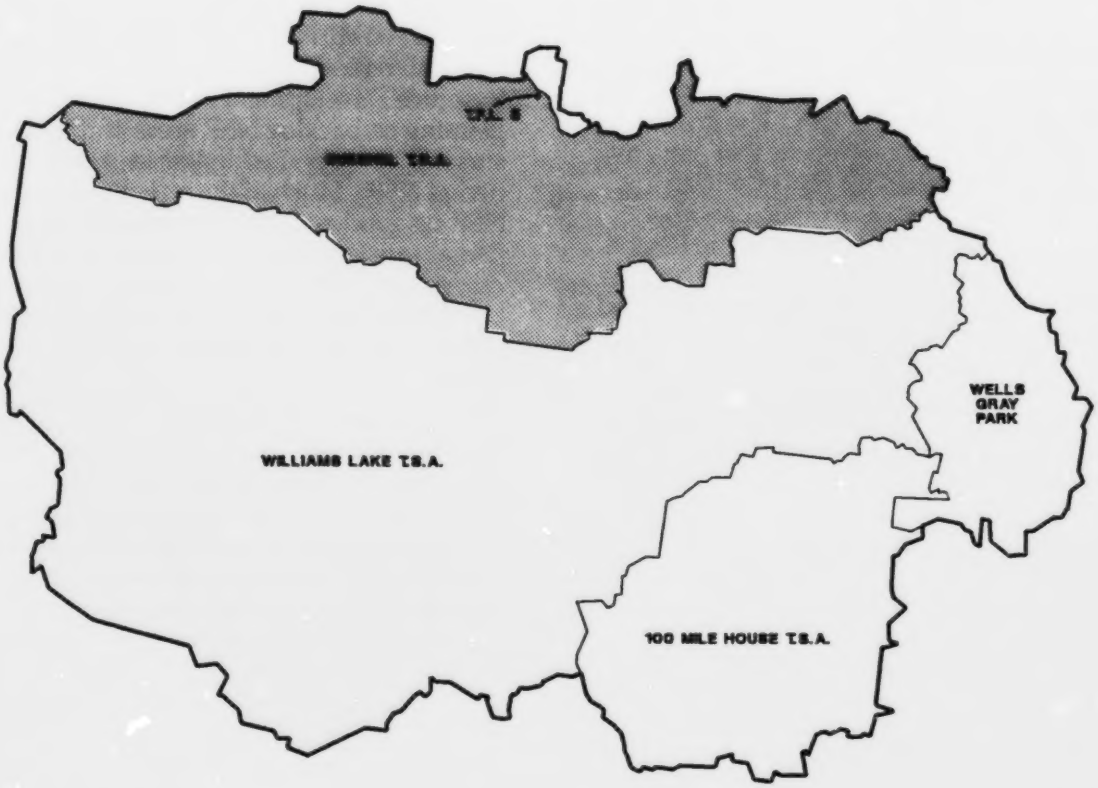
The increase in backlog NSR can be attributed to increased silviculture survey activity on crown land under the Forest Resource Development Agreement. In the past four years increased survey activity has enabled the Region to obtain a more accurate estimate of the backlog NSR. In total, Prince Rupert Forest Region has about 239 800 hectares classified as good and medium site backlog NSR. This includes 126 600 hectares of good and medium site burned in the Cassiar TSA in 1982. However, many of these sites are in locations that are considered presently inoperable, inaccessible, or have a low economic or treatment priority. The Prince Rupert Forest Region estimates that 106 400 hectares can be treated economically at this time (pages 18 and 19).

Vancouver

In 1984 the Vancouver Forest Region had an estimated 20 300 hectares of good and medium sites classified as backlog NSR. The 1988 summary indicates that 9 200 hectares remain (pages 20 and 21). The reduction in backlog NSR can be attributed to the increased reforestation activities funded through the Forest Resource Development Agreement. Increased planting on backlog NSR areas and silviculture surveys have resulted in less area being classified as NSR. Much of the remaining backlog NSR on good and medium sites will be reclassified as satisfactorily restocked after surveys are carried out using updated ecosystem classification procedures, tree species selection guides and appropriate silviculture stocking standards.

By 1990 the majority of the remaining backlog NSR area will be planted or reclassified by silviculture surveys. There will be little or no backlog reforestation required in the Vancouver Forest Region in the future. It is projected that by 1991 Vancouver will be the first Forest Region with no backlog NSR.

Location of the Good and Medium Site Backlog Not Satisfactorily Restocked Land

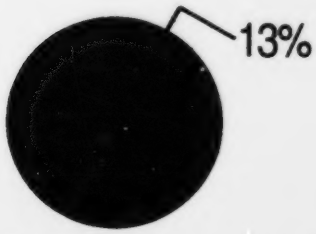


Good and medium site backlog* NSR+

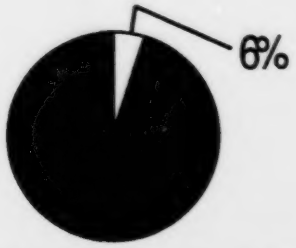
0 – 5	thousand ha	20 – 25	thousand ha
5 – 10	thousand ha	25 – 30	thousand ha
10 – 15	thousand ha	30+	thousand ha
15 – 20	thousand ha		

*Backlog – areas denuded prior to 1982

+NSR – not satisfactorily restocked (includes non-commercial brush areas)

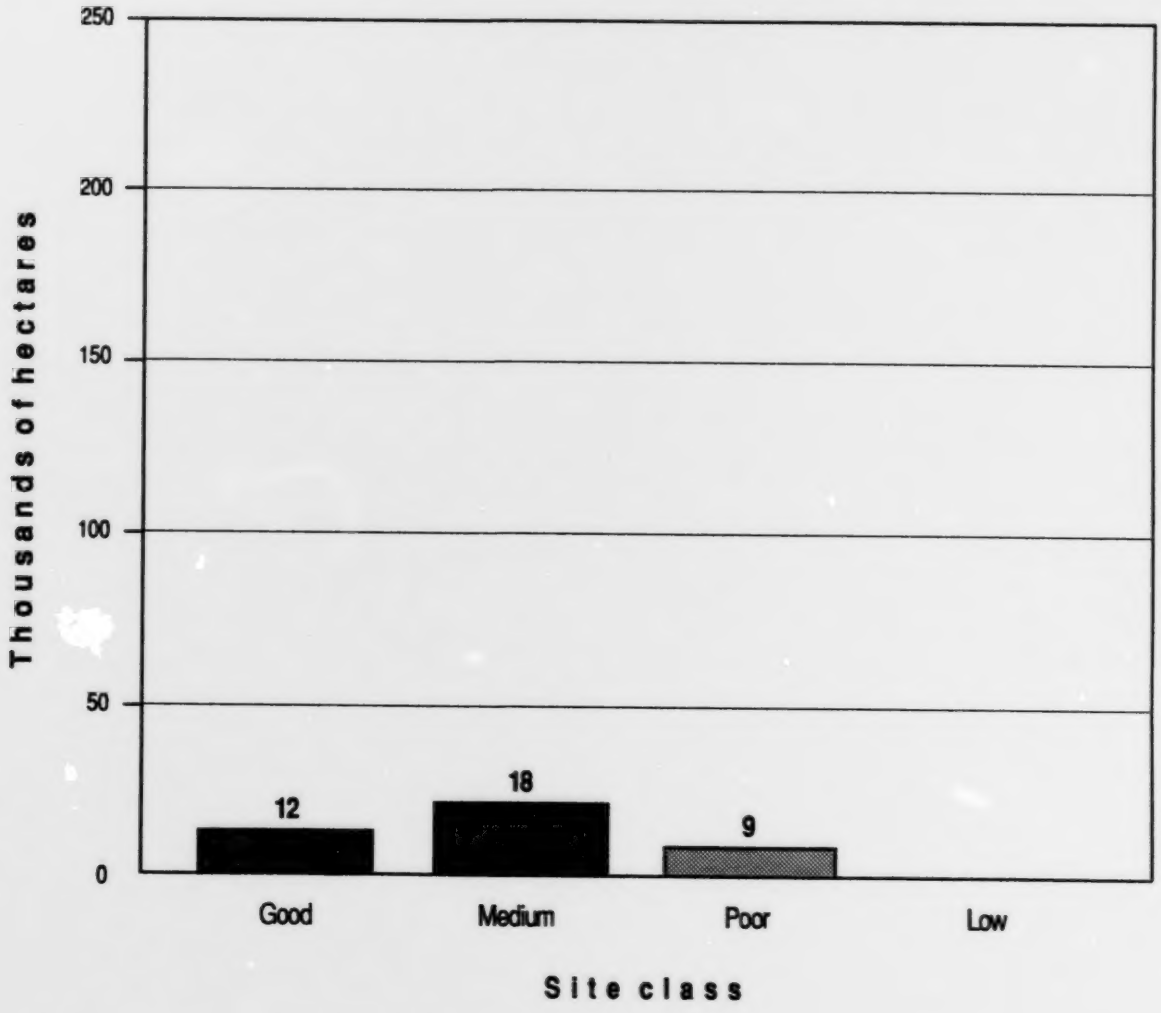


Provincial Forest Land



Provincial Good & Medium Site Backlog NSR

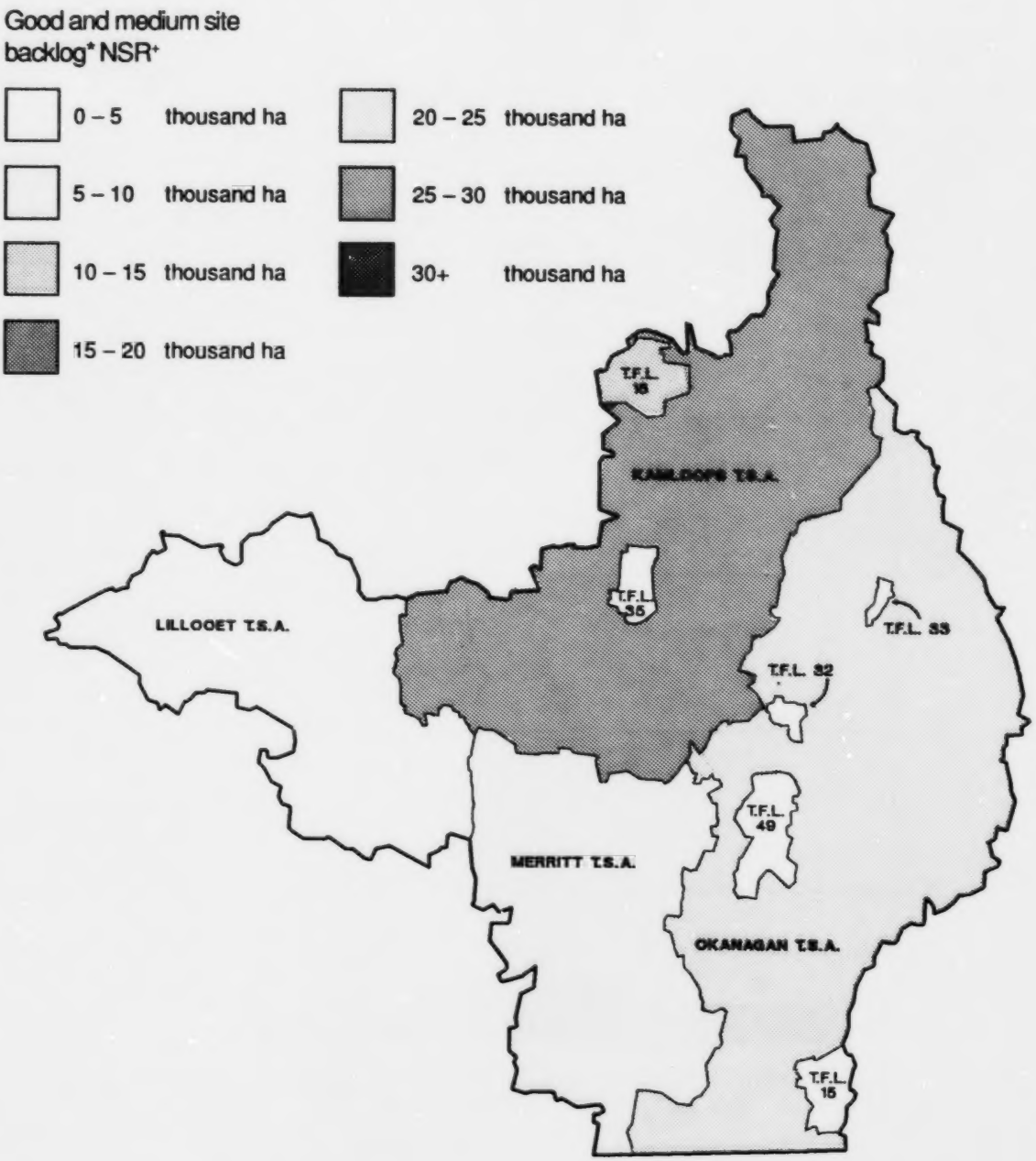
Backlog* NSR+ by Site Class



*Backlog – areas denuded prior to 1982

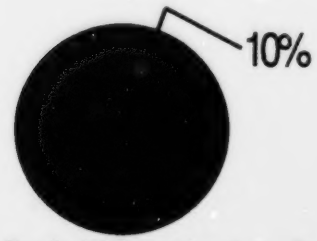
+NSR – not satisfactorily restocked (includes non-commercial brush areas)

Location of the Good and Medium Site Backlog Not Satisfactorily Restocked Land

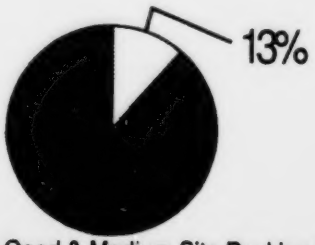


*Backlog – areas denuded prior to 1982

+NSR – not satisfactorily restocked (includes non-commercial brush areas)

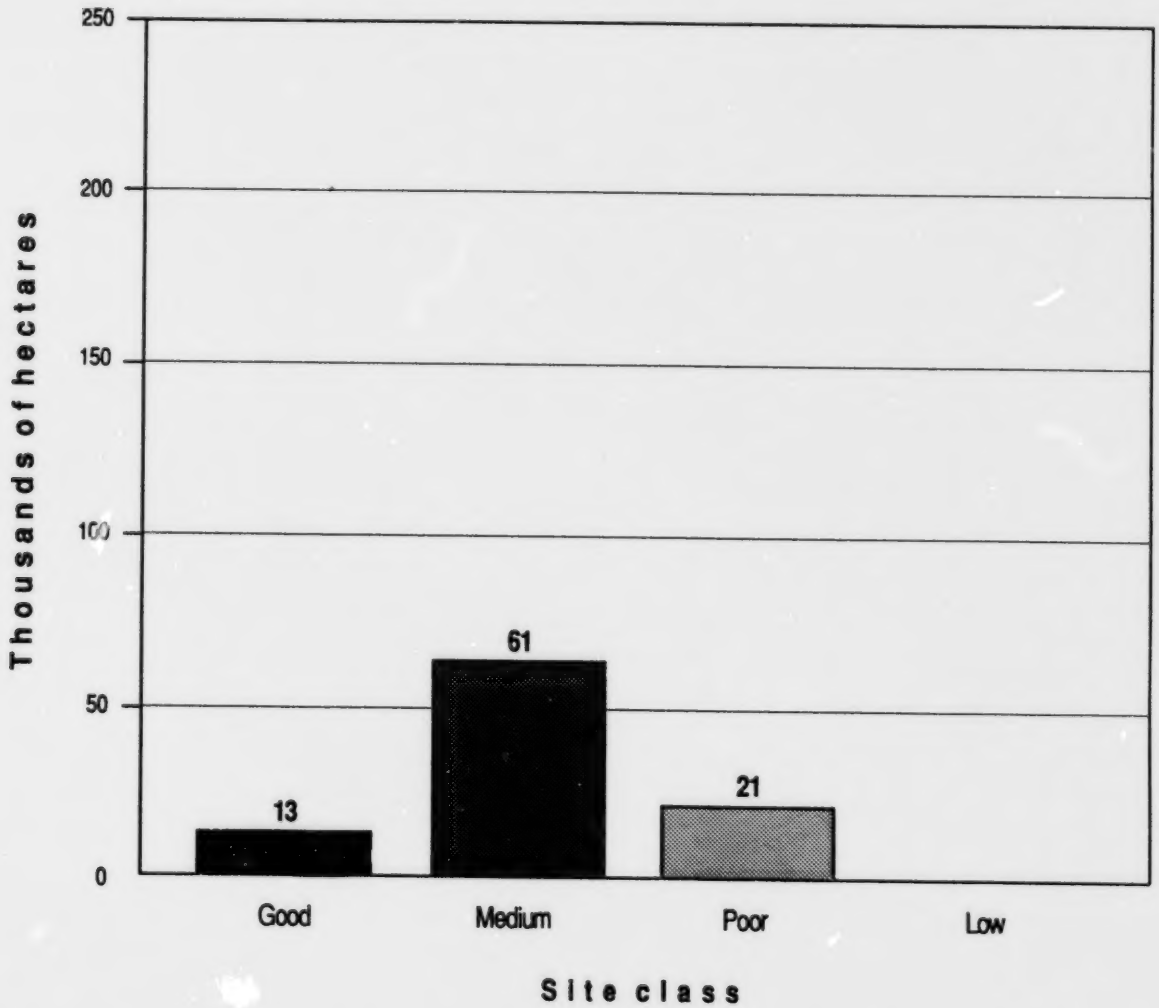


Provincial Forest Land



Provincial Good & Medium Site Backlog NSR

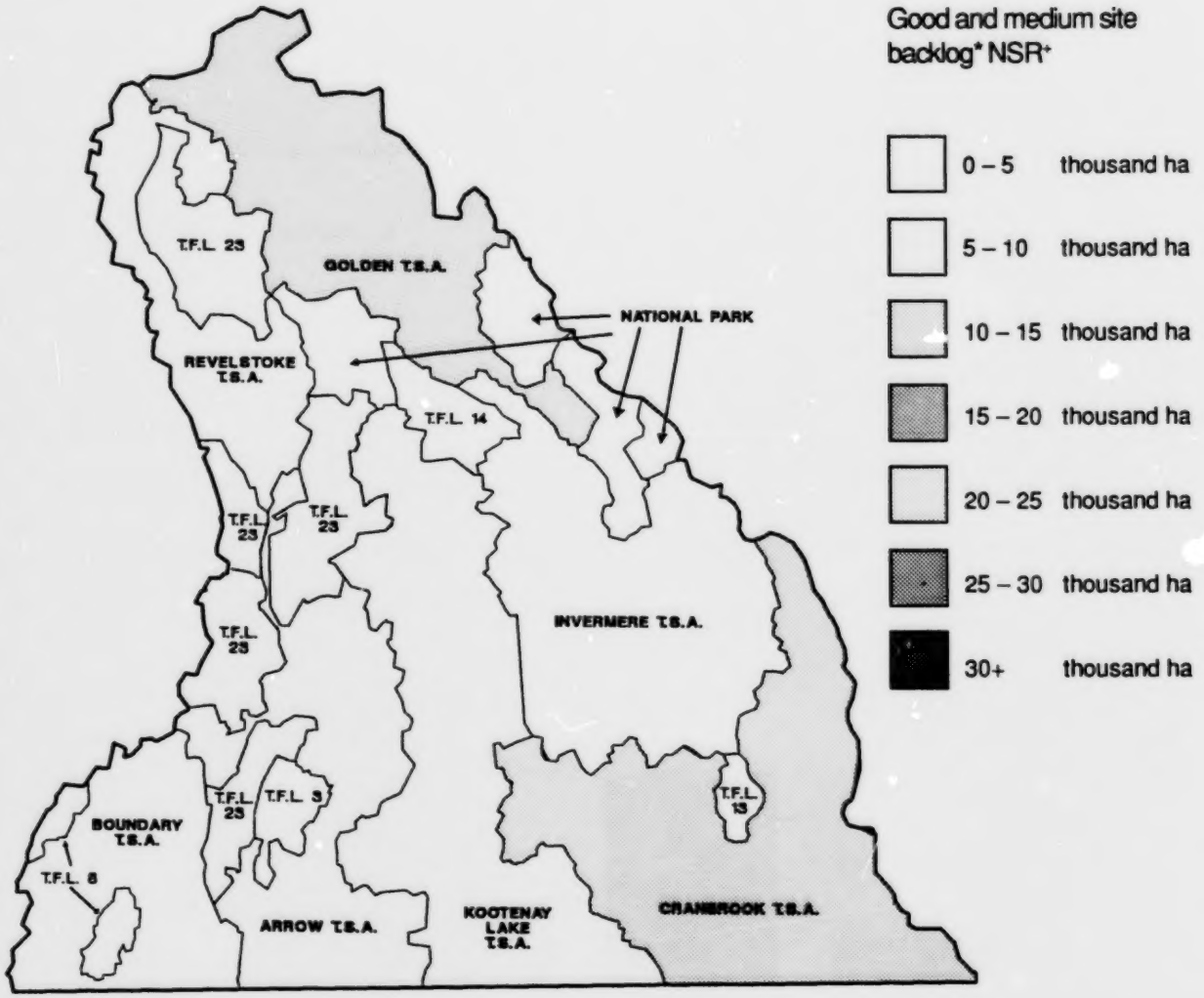
Backlog* NSR+ by Site Class



*Backlog – areas denuded prior to 1982

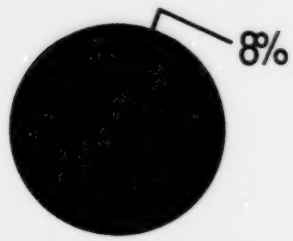
+NSR – not satisfactorily restocked (includes non-commercial brush areas)

Location of the Good and Medium Site Backlog Not Satisfactorily Restocked Land



*Backlog – areas denuded prior to 1982

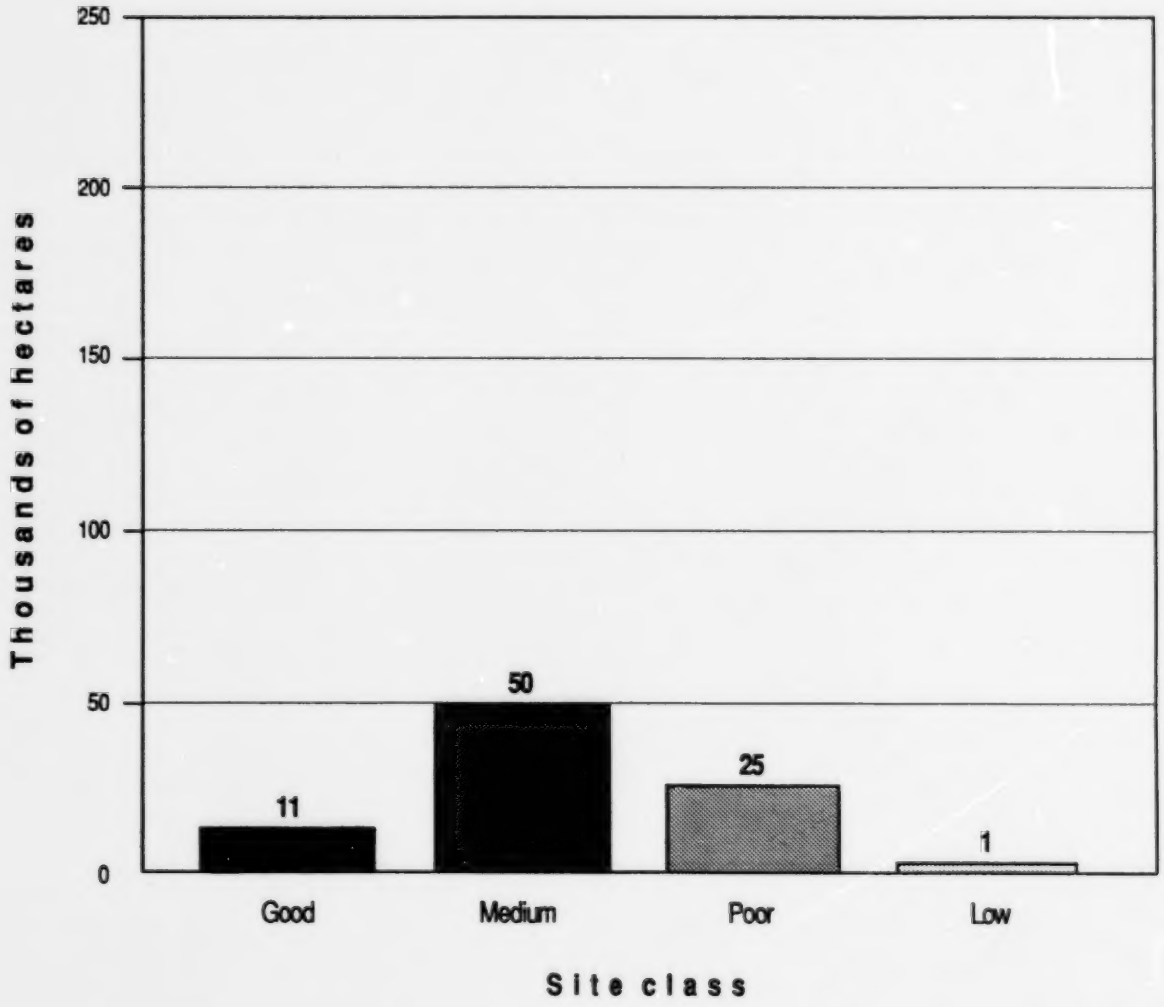
+NSR – not satisfactorily restocked (includes non-commercial brush areas)



Provincial Forest Land

Provincial Good & Medium Site Backlog NSR

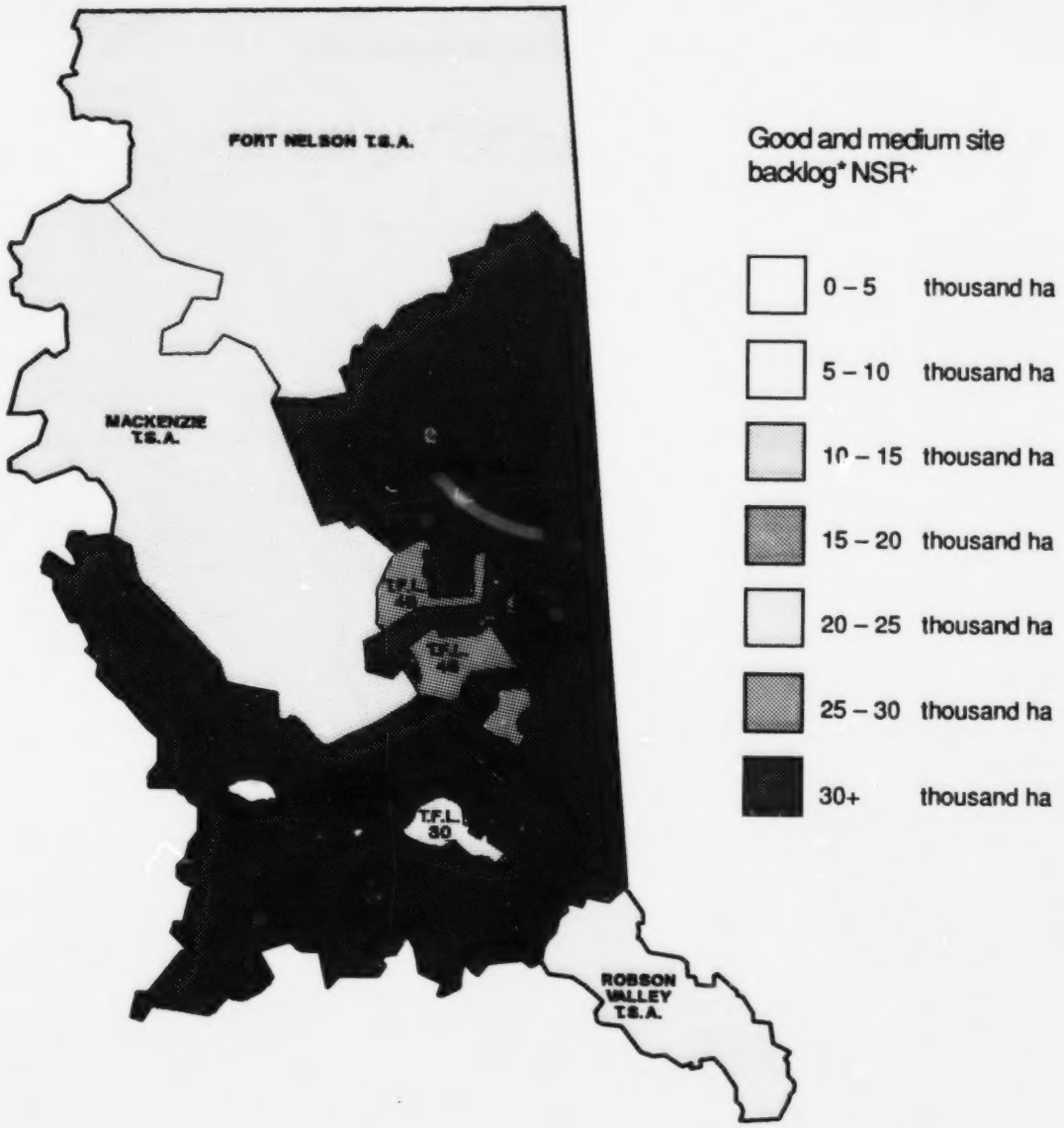
Backlog* NSR+ by Site Class



*Backlog – areas denuded prior to 1982

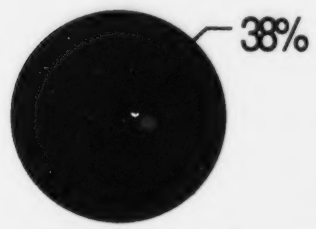
+NSR – not satisfactorily restocked (includes non-commercial brush areas)

Location of the Good and Medium Site Backlog Not Satisfactorily Restocked Land

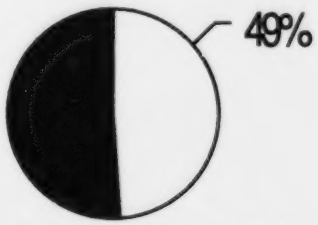

FORT NELSON T.S.A.
MACKENZIE T.S.A.
T.F.L. 30
ROBSON VALLEY T.S.A.
Good and medium site backlog* NSR+
0 – 5 thousand ha
5 – 10 thousand ha
10 – 15 thousand ha
15 – 20 thousand ha
20 – 25 thousand ha
25 – 30 thousand ha
30+ thousand ha

*Backlog – areas denuded prior to 1982

+NSR – not satisfactorily restocked (includes non-commercial brush areas)

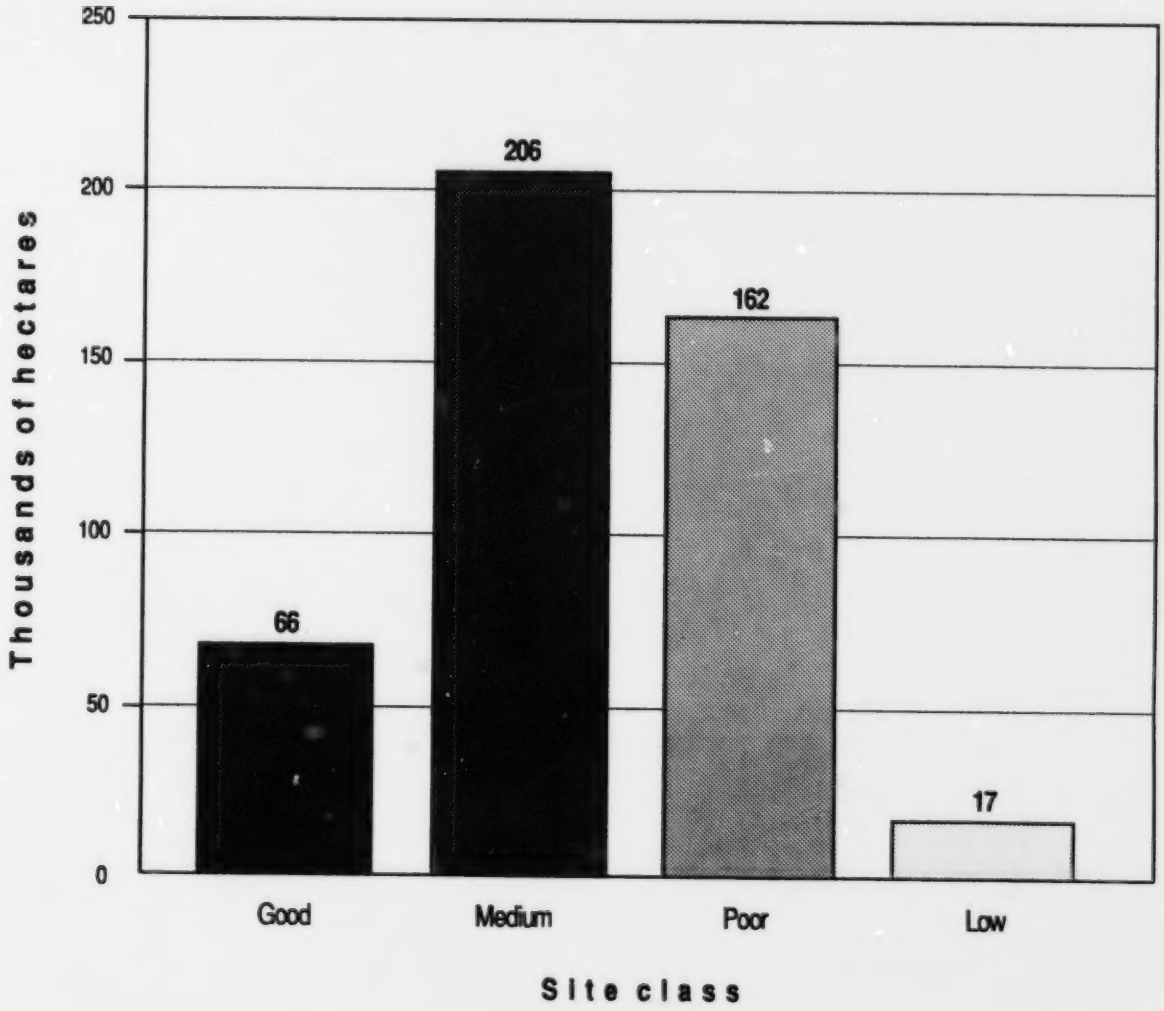


Provincial Forest Land



Provincial Good & Medium Site Backlog NSR

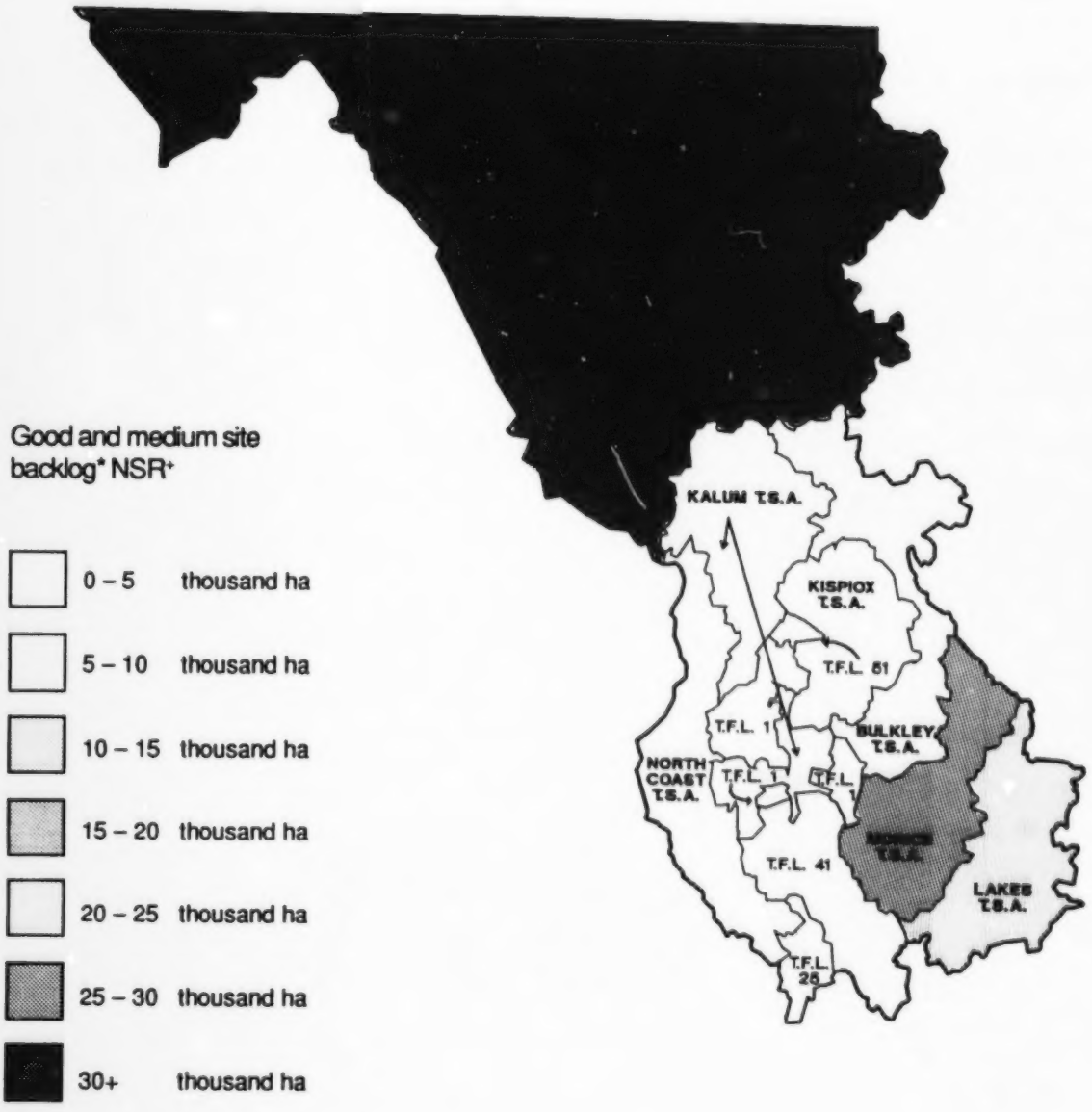
Backlog* NSR+ by Site Class



*Backlog – areas denuded prior to 1982

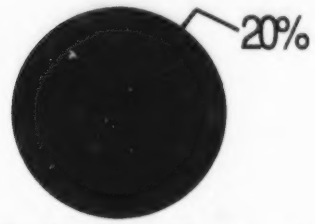
+NSR – not satisfactorily restocked (includes non-commercial brush areas)

Location of the Good and Medium Site Backlog Not Satisfactorily Restocked Land

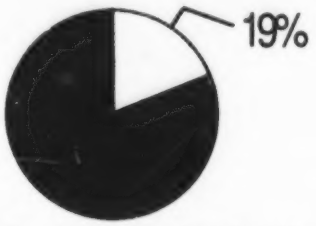


*Backlog – areas denuded prior to 1982

+NSR – not satisfactorily restocked (includes non-commercial brush areas)

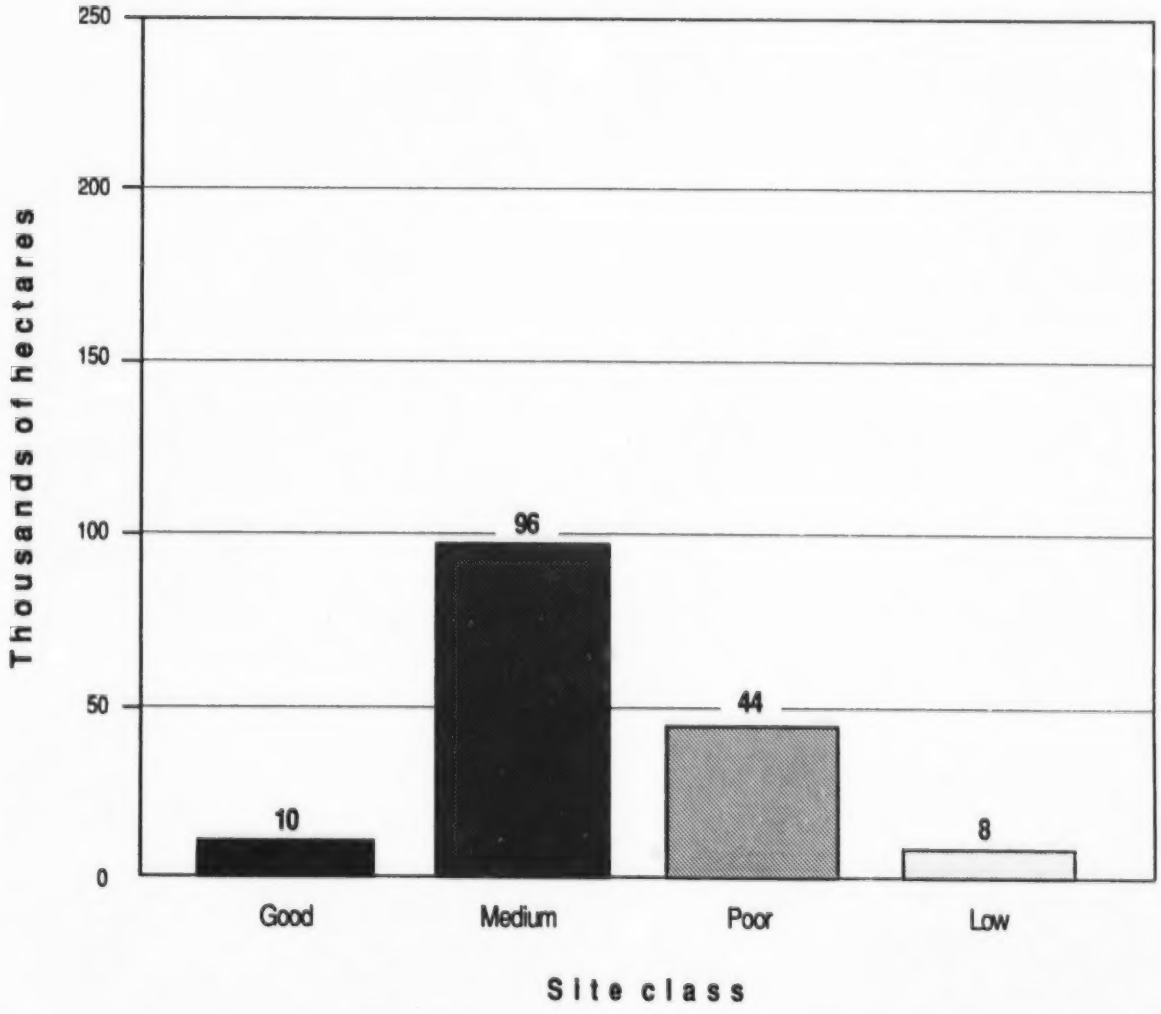


Provincial Forest Land



Provincial Good & Medium Site Backlog NSR

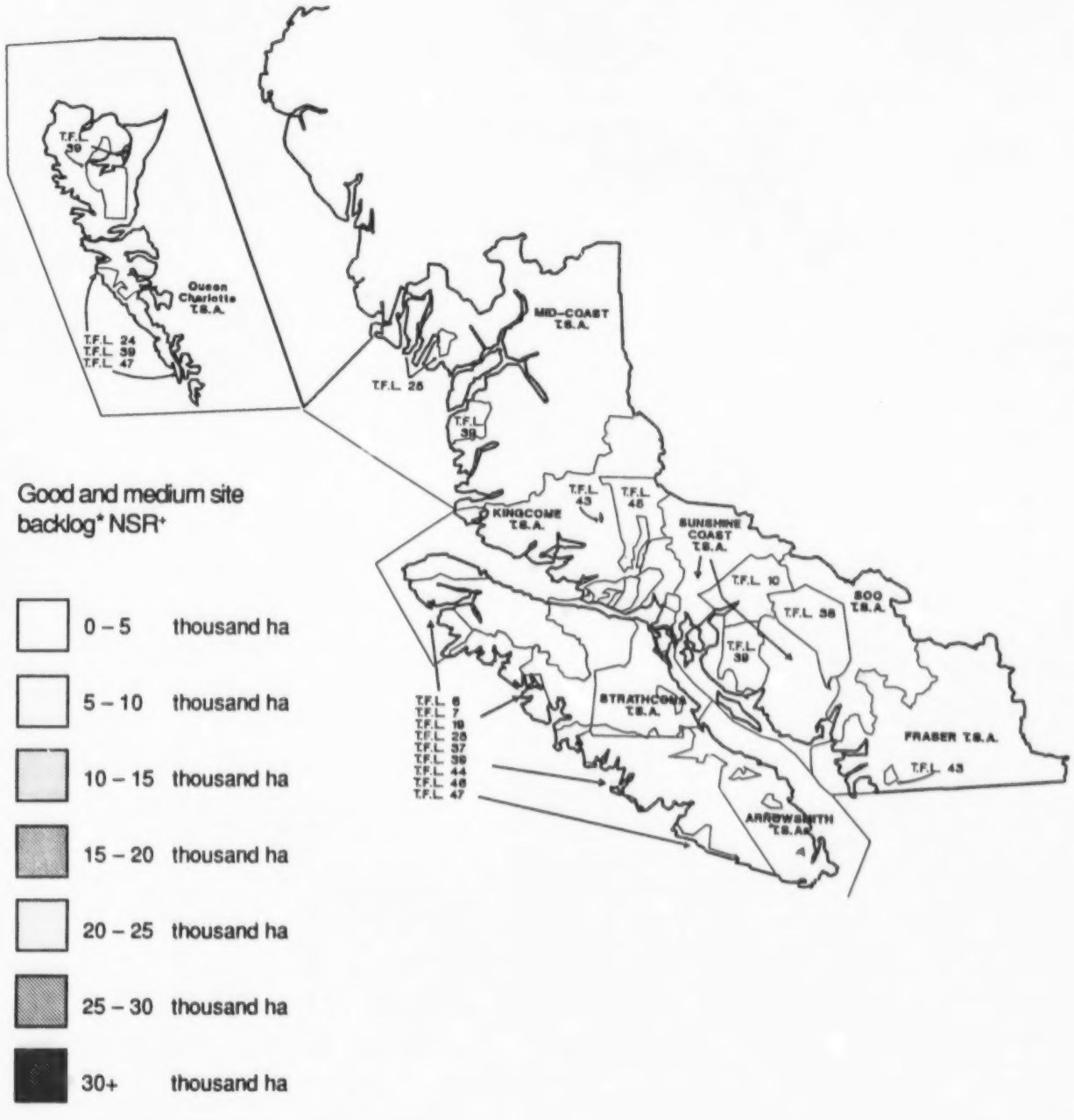
Backlog* NSR+ by Site Class



*Backlog – areas denuded prior to 1982

+NSR – not satisfactorily restocked (includes non-commercial brush areas)

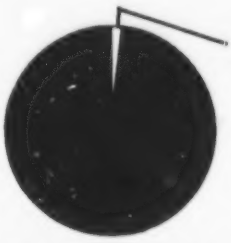
Location of the Good and Medium Site Backlog Not Satisfactorily Restocked Land



*Backlog – areas denuded prior to 1982

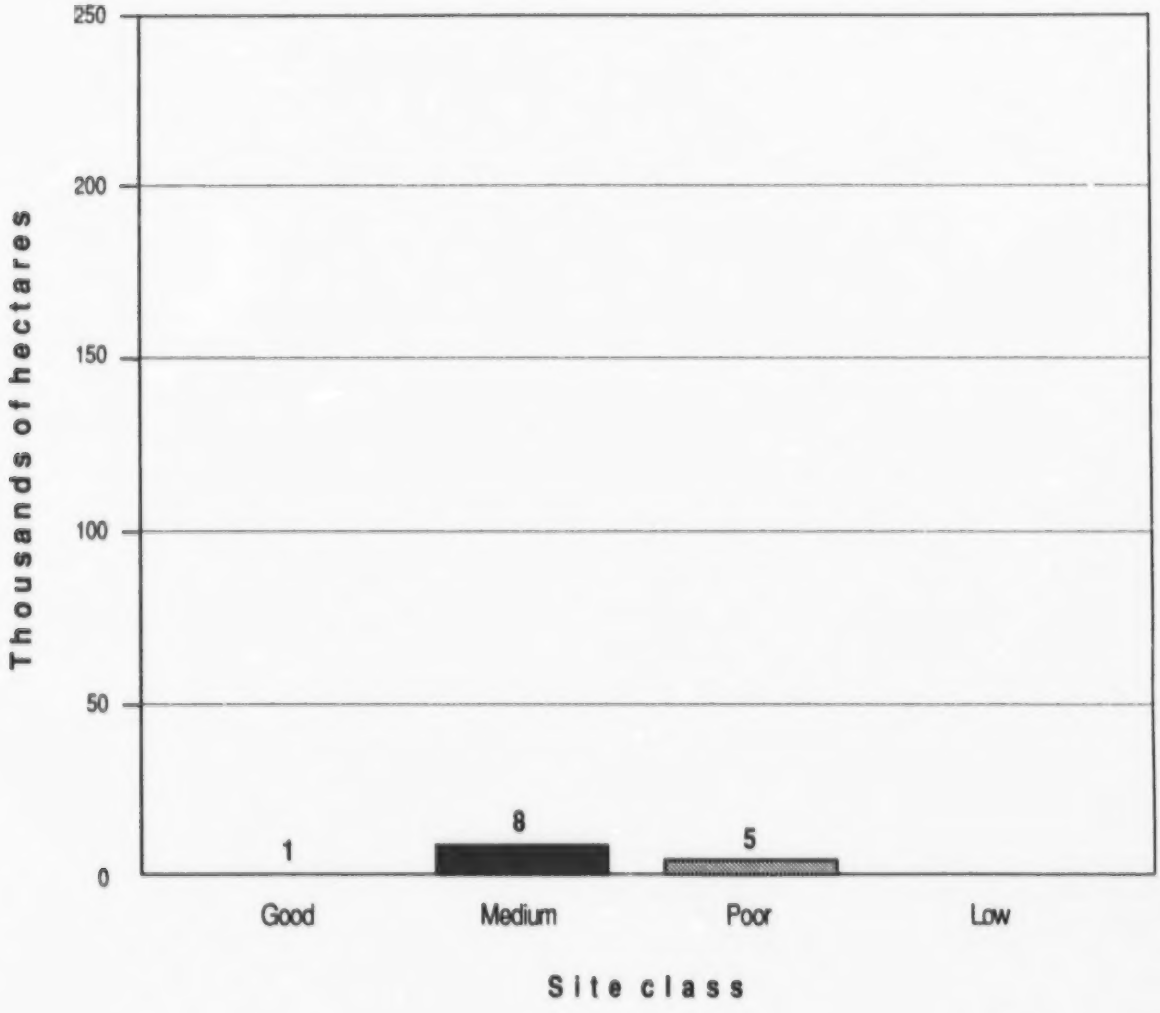
+NSR – not satisfactorily restocked (includes non-commercial brush areas)

Provincial Forest Land



Provincial Good & Medium Site Backlog NSR

Backlog* NSR+ by Site Class



*Backlog – areas denuded prior to 1982

+NSR – not satisfactorily restocked (includes non-commercial brush areas)

Appendix 1 Summary of Regional Proportions

Summary Table of Provincial/Regional Proportions

Region	Percent of Provincial	
	Forest land	Good and medium backlog NSR
Cariboo	13%	6%
Kamloops	10%	13%
Nelson	8%	11%
Prince George	38%	49%
Prince Rupert	20%	19%
Vancouver	11%	2%
Provincial totals	100.0%	100.0%

Appendix 2 Summary of Backlog NSR by Region, TSA and TFL

Total Backlog* Not Satisfactorily Restocked Land+

Region	Site class				
	Good	Medium	Poor	Low	Total
	(area in hectares)				
Cariboo	12 297	18 450	9 062	131	39 940
Kamloops	13 128	61 113	20 837	8	95 086
Nelson	10 856	49 931	25 104	706	86 597
Prince George	65 925	205 822	162 532	16 789	451 068
Prince Rupert	10 355	96 041	44 237	7 842	158 475
Vancouver	1 038	8 189	4 836	353	14 416
Provincial totals	113 599	439 546	266 608	25 829	845 582
Total good and medium	553 145 Hectares				

* BACKLOG - areas denuded prior to 1982 (includes non-commercial brush areas).

\+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licenses.

\+ Data derived from TFL's and the Ministry of Forest's History Records. These data represent the NET area after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

Appendix 2 Summary of Backlog NSR by Region, TSA and TFL

Regional Summary of Backlog* Not Satisfactorily Restocked Land+

Region	Tenure type	Site class				
		Good	Medium	Poor	Low	Total
		(area in hectares)				
Cariboo	TSA	11 783	18 393	9 062	131	38 369
	TFL	514	57	0	0	571
	Total	12 297	18 450	9 062	131	39 940
Kamloops	TSA	11 596	49 386	20 583	8	81 573
	TFL	1 532	11 727	254	0	13 513
	Total	13 128	61 113	20 837	8	95 086
Nelson	TSA	8 118	42 147	23 280	636	74 231
	TFL	2 738	7 784	1 824	20	12 366
	Total	10 856	49 931	25 104	706	86 597
Prince George	TSA	54 636	169 672	128 086	16 789	369 183
	TFL	11 289	36 150	34 446	0	81 885
	Total	65 925	205 822	162 532	16 789	451 068
Prince Rupert	TSA	8 555	92 341	44 237	7 842	152 975
	TFL	1 800	3 700	0	0	5 500
	Total	10 355	96 041	44 237	7 842	158 475
Vancouver	TSA	604	7 754	4 573	13	12 944
	TFL	434	435	263	340	1 472
	Total	1 038	8 189	4 836	353	14 416
Province	TSA	95 292	379 693	229 821	25 469	730 275
	TFL	18 307	59 853	36 787	360	115 307
	Total	113 599	439 546	266 608	25 829	845 582

Total good and medium **553 145 Hectares**

* BACKLOG - areas denuded prior to 1982 (includes non-commercial brush areas).

\+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licenses.

\+ Data derived from TFL's and the Ministry of Forest's History Records. These data represent the NET area after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

Appendix 2 Summary of Backlog NSR by Region, TSA and TFL

Cariboo Forest Region

Regional Summary of Backlog* Not Satisfactorily Restocked Land+

Tenure Type	Tenure #	Tenure name (and location)	Site class Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	23	100 Mile House	742	2 986	1 511		5 239
	26	Quesnel	7 731	10 154	1 294		19 179
	29	Williams Lake	3 310	5 253	6 257	131	14 951
Total TSA			11 783	18 393	9 062	131	39 369
TFL	5	MacKenzie-Cariboo (Quesnel)	514	57			571
Total TFL			514	57	0	0	571
Total region			12 297	18 450	9 062	131	39 940

* BACKLOG - areas denuded prior to 1982 (includes non-commercial brush areas).

\+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licences.

\+ Data derived from TFL's and the Ministry of Forest's History Records. These data represent the NET area after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

Appendix 2 Summary of Backlog NSR by Region, TSA and TFL

Kamloops Forest Region

Regional Summary of Backlog* Not Satisfactorily Restocked Land+

Tenure Type	Tenure #	Tenure name (and location)	Site class Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	11	Kamloops	4 763	21 812	6 061	8	32 644
	15	Lillooet	638	2 785	5 107		8 530
	18	Merrit	1 818	5 635	4 030		11 483
	22	Okanagan	4 377	19 154	5 385		28 916
Total TSA			11 596	49 386	20 583	8	81 573
TFL	15	Inkaneep (Okanagan Falls)		216			216
	18	Clearwater	1 049	9 794	130		10 973
	33	Sicamous					0
	35	Jamieson Creek	222	631	15		868
	49	Okanagan (Kelowna)	261	649	100		1 007
	49	Okanagan (Armstrong)		440	9		449
Total TFL			1 532	11 727	254	0	13 513
Total region			13 128	61 113	20 837	8	95 086

* BACKLOG - areas denuded prior to 1982 (includes non-commercial brush areas).

\+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licences.

\+ Data derived from TFL's and the Ministry of Forest's History Records. These data represent the NET area after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

Appendix 2 Summary of Backlog NSR by Region, TSA and TFL

Nelson Forest Region

Regional Summary of Backlog* Not Satisfactorily Restocked Land+

Tenure Type	#	Tenure name (and location)	Site class Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	1	Arrow	1 140	4 512	2 493		8 145
	2	Boundary	182	1 332	408		1 922
	5	Cranbrook	1 150	10 706	7 904	585	20 345
	7	Golden	3 826	11 110	6 389		21 325
	9	Invermere	732	3 781	2 248	22	6 783
	13	Kootenay Lake	607	7 435	3 604	79	11 725
	27	Revelstoke	481	3 271	234		3 986
Total TSA			8 118	42 147	23 280	686	74 231
TFL	3	Little Slocan (Arrow)		1 264			1 264
	8	Boundary Creek	300	435		20	755
	13	Bull River (Cranbrook)	30	34	2		66
	14	Spillimacheen (Invermere)	61	207	27		295
	23	Arrow Lakes (Revelstoke)	2 347	5 844	1 795		9 986
Total TFL			2 738	7 784	1 824	20	12 366
Total region			10 856	49 931	25 104	706	86 597

* BACKLOG - areas denuded prior to 1982 (includes non-commercial brush areas).

\+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licences.

\+ Data derived from TFL's and the Ministry of Forest's History Records. These data represent the NET area after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

Appendix 2 Summary of Backlog NSR by Region, TSA and TFL

Prince George Forest Region

Regional Summary of Backlog* Not Satisfactorily Restocked Land+

Tenure Type	#	Tenure name (and location)	Site class Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	6	Peace (Ft St. John & Dawson Cr.)	2 828	45 280	16 716	16	64 840
	8	Fort Nelson	8 662	11 836	19 207	15 352	55 057
	16	MacKenzie	4 244	18 057	62 444	57	84 802
	17	Robson Valley (McBride)	912	7 317	2 001	800	11 030
	24	Prince George	37 990	87 182	27 718	564	153 454
Total TSA			54 636	169 672	128 086	16 789	369 183
TFL	30	Sinclair (N.E. of P. George)	9 717	10 860	1 938		22 515
	42	Tanizul (Fort St James)	675	1 119			1 794
	48	Chetwynd	897	24 171	32 508		57 576
Total TFL			11 289	36 150	34 446	0	81 885
Total region			65 925	205 822	162 532	16 789	451 068

* BACKLOG - areas denuded prior to 1982 (includes non-commercial brush areas).

\+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licences.

\+ Data derived from TFL's and the Ministry of Forest's History Records. These data represent the NET area after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

Appendix 2 Summary of Backlog NSR by Region, TSA and TFL

Prince Rupert Forest Region

Regional Summary of Backlog* Not Satisfactorily Restocked Land+

Tenure Type	Tenure #	Tenure name (and location)	Site class Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	3	Bulkley	698	4 609	176	23	5 506
	4	Cassiar	166	45 465	9 736	6 980	62 347
	10	Kalum	2 566	2 733	9 941		15 240
	12	Kispiox	1 911	2 406	4 028		8 345
	14	Lakes	959	11 363	6 560	681	19 563
	20	Morice	1 604	24 469	3 785	66	29 924
	21	North Coast	651	1 296	10 011	92	12 050
Total TSA			8 555	92 341	44 237	7 842	152 975
TFL	1	Port Edward (Kalum)	1 500	3 000			4 500
	25	Naka					0
	41	Kitimat					0
	51	Cranberry (Kispiox)	300	700			1 000
Total TFL			1 800	3 700	0	0	5 500
Total region			10 355	96 041	44 237	7 842	158 475

* BACKLOG - areas denuded prior to 1982 (includes non-commercial brush areas).

\+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licences.

\+ Data derived from TFL's and the Ministry of Forest's History Records. These data represent the NET area after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

Appendix 2 Summary of Backlog NSR by Region, TSA and TFL

Vancouver Forest Region

Regional Summary of Backlog* Not Satisfactorily Restocked Land+

Tenure Type	#	Tenure name (and location)	Site class Good	Medium	Poor	Low	Total
			(area in hectares)				
TSA	19	Mid-coast	124	354	108	6	592
	25	Queen Charlotte		96		7	103
	30	Fraser	64	2 142	2 699		4 905
	31	Soo	44	727	759		1 530
	32	Quadra			7		7
	33	Kingcome	202	1 164	330		1 696
	34	Nootka					0
	37	Strathcona	25	805	155		985
	38	Arrowsmith	17	413	45		475
	39	Sunshine Coast	128	2 053	470		2 651
Total TSA			604	7 754	4 573	13	12 944
TFL	6	Quatsino(Port McNeill)	18	50	17		85
	7	Salmon River					0
	10	Toba (Toba River)	269	118	101		488
	19	Tahsis (Gold River)	106	109	112	340	667
	24	Moresby (Q.C.I.)	24	70	24		118
	25	Naka (Port McNeill)	8	22	7		37
	26	Mission					0
	37	Nimpkish					0
	38	Squamish (Squamish River)					0
	39	Powell River (all divisions)		29	2		31
	43	Fraser/Hanathko/Kingcome					0
	44	Alberni (Port Alberni)	9	37			46
	45	Cordera-Knight(all divisions)					0
	46	West Coast (all divisions)					0
	47	Duncan Bay (all divisions)					0
Total TFL			434	435	263	340	1 472
Total region			1 038	8 189	4 836	353	14 416

* BACKLOG - areas denuded prior to 1982 (includes non-commercial brush areas).

\+ Summary for Crown Land only and includes Timber Supply Areas and Tree Farm Licences.

\+ Data derived from TFL's and the Ministry of Forest's History Records. These data represent the NET area after deductions were made for areas considered inoperable, inaccessible or a low economic or treatment priority.

Summary of Backlog NSR Net-down process. Crown Land Only.

Region	Site class	Gross[1] NSR area (ha)	Inoper.[2] N.S.R (ha)	Selective[3] logged (ha)	Seed &[4] shelter (ha)	Trees <12 yrs[5] >700 ws/ha. (ha)	Trees >=12 yrs[6] >500 ws/ha. (ha)	Total for[7] area <5 ha (ha)	Total area deducted	T.S.A.[8] net area (ha)	T.F.L.[9] net area (ha)	Total net area (ha)	Total net good & medium	Total gross good & medium
			Area deducted											
Province	Good	120 538	0	9 969	6 981	2 542	5 077	677	25 246	93 292	18 307	113 599	553 145	1 110 354
	Medium	911 656	446 493	46 965	13 529	8 609	14 185	2 182	531 963	379 693	59 853	439 546		
	Poor	264 289	1 775	26 060	1 045	2 685	2 248	580	34 393	229 896	36 787	266 683		
	Low	25 804	0	198	0	87	49	76	410	25 394	360	25 754		
	-All-	1 322 287	448 268	83 192	21 555	13 923	21 559	3 515	592 012	730 275	115 307	845 582	553 145	1 110 354

1. Includes information on Crown land only. Includes the gross backlog NSR for Timber Supply Areas (TSA). The gross backlog NSR on TSA's was derived from the history records for Cariboo, Kamloops, Nelson, Prince Rupert, and Vancouver Forest Regions. The estimate of gross backlog NSR in Prince George was derived from the 1988 Incremental Silviculture Planning Audit (by Laing and McCullock). Includes the estimate of backlog NSR on Tree Farm Licences.
2. Includes all areas coded as inoperable in the History Records. Includes the 1982 Cassiar fires in Prince Rupert and all Timber Supply Areas (TSA) not on the Ministry of Forest's history records.
3. Includes all areas selectively logged and classed as NSR. This assumes that the main method of regeneration on these stands will be natural regeneration. Many of these areas will be reclassified as satisfactorily restocked (SR) after silviculture surveys are carried out using appropriate stocking standards.
4. All NSR areas logged as seed tree or shelterwood systems are included. It is assumed that these areas are slated for natural regeneration and will only require surveys and reclassification to change the stocking status.
5. All clearcut areas classified as NSR with more than 700 well-spaced trees per hectare with an average tree of less than 12 years old were included. This was based on average provincial minimum stocking standard of 700 well-spaced trees, and the earliest free growing date of 12 years.
6. Includes all clearcut areas classified as NSR with more than 500 well-spaced trees per hectare and average seedling age greater than 12 years. Many of these areas will have 1500-3000 total trees per hectare. These areas are considered a low priority and low return on investment of silviculture dollars.
7. Includes all areas classed as NSR and less than 5 hectares in size. Many of these areas will be reforested through natural regeneration.
8. History records were used exclusively for all Regions to generate the net TSA backlog NSR statistics. All TSA areas included in this report were denuded prior to 1982 except for 14 900 hectares of medium site burned in the 1983 Swiss Fire in the Prince Rupert Forest Region. The Swiss Fire area is currently being treated under FRDA.
9. Includes the net TFL backlog NSR submitted by the Licencees.

Summary of Backlog NSR Net-down process.
Crown Land Only.

Region	Site class	Gross[1] NSR area (ha)	Inoper.[2] N.S.R (ha)	Selective[3] logged (ha)	Seed &[4] shelter (ha)	Trees <12 yrs[5] >700 ws/ha. (ha)	Trees>=12 yrs[6] >500 ws/ha. (ha)	Total for[7] area <5 ha (ha)	Total area deducted	T.S.A.[8] net area (ha)	T.F.L.[9] net area (ha)	Total net area (ha)	Total net good & medium	Total gross good & medium
			Area deducted											
Cariboo	Good	13 569		842	33	677	132	102	1 786	11 783	514	12 297	30 747	38 961
	Medium	24 821		5 612	149	243	216	208	6 428	18 393	57	18 450		
	Poor	14 967	1 775	3 923		139	31	37	5 905	9 062	0	9 062		
	Low	216		85					85	131	0	131		
	-All-	53 573	1 775	10 462	182	1 059	379	347	14 204	39 369	571	39 940		
Kamloops	Good	18 382		3 678	396	506	2 063	143	6 786	11 596	1 532	13 128	74 241	114 305
	Medium	83 164		22 720	710	2 562	7 220	566	33 778	49 386	11 727	61 113		
	Poor	37 385		15 339	55	212	1 035	161	16 802	20 583	254	20 837		
	Low	11						3	3	8	0	8		
	-All-	138 942	0	41 737	1 161	3 280	10 318	873	57 369	81 573	13 513	95 086		
Nelson	Good	15 216		3 532	1 058	454	1 917	137	7 098	8 118	2 738	10 856	60 787	93 758
	Medium	68 020		12 135	4 002	4 432	4 854	450	25 873	42 147	7 784	49 931		
	Poor	32 147		5 662	414	1 408	1 182	201	8 867	23 280	1 824	25 104		
	Low	842		83		19	49	5	156	686	20	706		
	-All-	116 225	0	21 412	5 474	6 313	8 002	793	41 994	74 231	12 366	86 597		

See page 33 for explanation of catagories.

Summary of Backlog NSR Net-down process.
Crown Land Only.

Region	Site class	Gross[1] NSR area (ha)	Inoper.[2] N.S.R (ha)	Selective[3] logged (ha)	Seed &[4] shelter (ha)	Trees <12 yrs[5] >700 ws/ha. (ha)	Trees >=12 yrs[6] >500 ws/ha. (ha)	Total for[7] area <5 ha (ha)	Total area deducted	T.S.A.[8] net area (ha)	T.F.L.[9] net area (ha)	Total net area (ha)	Total net good & medium	Total gross good & medium
			Area deducted											
Pr. George	Good	63 125		1 382	5 369	677	843	218	8 489	54 636	11 289	65 925	271 747	613 439
	Medium	502 875	319 874	2 826	7 880	788	1 438	397	333 203	169 672	36 150	205 822		
	Poor	129 768		495	553	582		52	1 682	128 086	34 446	162 532		
	Low	16 821				32			32	16 789	0	16 789		
	-All-	712 589	319 874	4 703	13 802	2 079	2 281	667	343 406	369 183	81 885	451 068		
Pr. Rupert	Good	9 628		535	125	228	122	63	1 073	8 555	1 800	10 355	106 396	239 839
	Medium	224 711	126 619	3 663	788	567	425	308	132 370	92 341	3 700	96 041		
	Poor	45 186		497	23	344		10	874	44 312	0	44 312		
	Low	7 895		30		36		62	128	7 767	0	7 767		
	-All-	287 420	126 619	4 725	936	1 175	547	443	134 445	152 975	5 500	158 475		
Vancouver	Good	618						14	14	604	434	1 038	9 227	9 552
	Medium	8 065		9		17	32	253	311	7 754	435	8 189		
	Poor	4 836		144				119	263	4 573	263	4 836		
	Low	19						6	6	13	340	353		
	-All-	13 538	0	153	0	17	32	392	594	12 944	1 472	14 416		

See page 33 for explanation of catagories.